

## CLAIM AMENDMENTS

1           1. (Currently amended) A recombinant nucleic acid for  
2       promoting microbial production of L-serine directly from  
3       carbohydrates, by avoiding or at least reducing decomposition of  
4       the L-serine to pyruvate and which is replicatable capable of  
5       replication in a microorganism of the family Corynebacterium and  
6       optionally a recombinant nucleic acid, characterized in that it  
7       has said recombinant nucleic acid having at least one serine  
8       biosynthesis sequence selected from the group consisting of serA,  
9       serB and serC and a nucleotide sequence coding for encoding L-  
10      serine dehydratase which is partially or completely deleted or is  
11      mutated [[or]] and which is expressed to a lesser degree than the  
12      expression of the naturally occurring L-serine dehydratase having  
13      nucleotide sequence of SEQ ID NO: 1 or which is not expressed at  
14      all.

1           2. (Currently amended) A recombinant nucleic acid  
2       according to claim 1, characterized in that the sdaA gene wherein  
3       the nucleotide sequence encoding L-serine dehydratase is partially  
4       or completely deleted or is mutated [[or]] and expressed to a  
5       lesser extent [[by]] in comparison with the expression of the  
6       naturally occurring sequence of SEQ ID NO: 1 or not expressed at  
7       all.

1           3. (Currently amended) A recombinant nucleic acid  
2 according to claim 1 claim 2, characterized by wherein the  
3 nucleotide sequence encoding L-serine dehydratase is a nucleotide  
4 sequence according to SEQ ID NO 1 whose nucleotides [[form]] from  
5 position 506 to position 918 are completely or partially deleted or  
6 are mutated, or an allele functionally equivalent thereto, or a  
7 homolog having a sequence complementary or derivative of this to  
8 said nucleotide sequence according to SEQ ID NO 1 whose nucleotides  
9 from position 506 to position 918 are completely or partially  
10 deleted or are mutated or a nucleotide sequence hybridizing  
11 therewith under stringent conditions with said nucleotide sequence  
12 according to SEQ ID NO 1 whose nucleotides from position 506 to  
13 position 918 are completely or partially deleted or are mutated.

1           4. (Currently amended) A recombinant nucleic acid  
2 according to claim 1, characterized in that it is isolated from a  
3 coryneform bacterium.

1           5. (Currently amended) A recombinant nucleic acid  
2 according to claim 1, characterized in that it is isolated from  
3 Corynebacterium or Brevibacterium.

1               6. (Currently amended) A recombinant nucleic acid  
2 according to claim 1, characterized in that it is isolated from  
3 Corynebacterium glutamicum or Brevibacterium flavum.

1               7. (Previously presented) A gene structure containing  
2 at least one nucleotide sequence according to claim 1 and  
3 nucleotide sequences having regulatory sequences operatively linked  
4 therewith.

1               8. (Previously presented) A vector containing at least  
2 one nucleotide sequence or a gene structure according to claim 7  
3 and additional nucleotide sequences for selection, for replication  
4 in the host cell or for integration in the host cell genome.

9 through 13 (canceled)

1               14. (Currently amended) A microorganism characterized  
2 in that it has having at least one serine biosynthesis sequence  
3 selected from the group consisting of serA, serB and serC and a  
4 nucleotide sequence which codes for encodes an L-serine  
5 dehydratase, which is deleted in whole or in part or is mutated  
6 [[or]] and which is expressed to a reduced extent [[by]] in  
7 comparison with expression of the naturally occurring L-serine  
8 dehydratase having nucleotide sequence of SEQ ID NO: 1 or is not  
9 expressed at all.

1               15. (Currently amended) A microorganism according to  
2        claim 14, characterized in that its sdaA gene wherein the  
3       nucleotide sequence which encodes an L-serine dehydratase has a  
4       nucleotide sequence of SEQ ID NO: 1 which is wholly or partially  
5        deleted or mutated [[or]] and is expressed to a reduced extent  
6        [[by]] in comparison with expression of the naturally occurring  
7       sdaA gene L-serine dehydratase or is not expressed at all.

1               16. (Currently amended) A microorganism according to  
2        containing in replicatable a form capable of replication, a nucleic  
3        acid according to claim 1.

1               17. (Currently amended) A microorganism according to  
2        claim 14, characterized in that it is a coryneform bacteria  
3       bacterium.

1               18. (Currently amended) A microorganism according to  
2        claim 14, characterized in that it brings to the family a belonging  
3       to the family of coryneform bacteria or brevibacteria.

1               19. (Currently amended) A microorganism according to  
2        claim 14, characterized in that it brings to the family a belonging  
3       to the family of Corynebacterium glutamicum or Brevibacterium  
4        flavum.

1           20. (Currently amended) A probe for identifying and/or  
2       isolating genes [[for]] coding for proteins which participate in  
3       the biosynthesis of L-serine characterized in that they are and  
4       which has a length of 10 to 30 nucleic acids, and which contains a  
5       partial sequence of the nucleic acid which encodes an L-serine  
6       dehydratase, according to claim 1, -is produced starting with  
7       nucleic acids according to claim 1 and contain serving as a  
8       suitable marker for detection of said genes.

21 through 25 (canceled)

1           26. (New) A recombinant nucleic acid for promoting  
2       microbial production of L-serine directly from carbohydrates, by  
3       avoiding or at least reducing decomposition of the L-serine to  
4       pyruvate and which is capable of replication in a microorganism of  
5       the family Corynebacterium said recombinant nucleic acid having at  
6       least one serine biosynthesis sequence selected from the group  
7       consisting of serA, serB and serC and a nucleotide sequence  
8       encoding L-serine dehydratase according to SEQ ID NO 1 whose  
9       nucleotides from position 506 to position 918 are completely or  
10      partially deleted or are mutated and expressed to a lesser degree  
11      than the expression of the naturally occurring L-serine dehydratase  
12      having nucleotide sequence of SEQ ID NO: 1 or which is not  
13      expressed at all.

1               27. (New) The recombinant nucleic acid defined in claim  
2       26 having a nucleotide sequence encoding L-serine dehydratase  
3       according to SEQ ID NO 1 whose nucleotides from position 506 to  
4       position 918 are completely deleted.